REMARKS/ARGUMENTS

Claims 1-2, 4-6, 8-11, 15-20, and 22-27 remain in this application. Claim 2 has been amended herein. Claims 3, 7, 12-14 and 21 were previously canceled.

1. Claim Rejections – 35 USC §112, Second Para.

Claim 2 is rejected under 35 USC §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. Claim 2 has been amended to correct the lack of antecedent basis. Accordingly, the rejection is traversed.

2. §103 Rejections

Claims 1, 2, 4-6, 8-11, 15-20, and 22-27 are rejected under 35 U.S.C. 103(a over Beall et al. (US 6,132,671) in view of Chalasani et al. (US 6,080,345) and Gheorgiu (US 6,287,509).

Respectfully, the combination above does not render the claimed invention obvious. Simply, none of the references, alone or in combination, teach the claimed invention, i.e., the organic compound with the lower weight loss onset temperature being *substantially removed* prior to the organic compound with the higher weight loss onset temperature and where an *oxidizing atmosphere* is provided.

Respectfully, we believe that Examiner is also misreading Beall. Examiner states that Beall teaches that if only a portion of the binder is removed during drying that the rest must be removed in a first phase of firing. However, even if that were true, Beall does not teach the claimed limitation that the organic compound with the lower weight loss onset temperature is *substantially removed* prior to the release of the organic compound with the higher onset temperature while also providing an oxidizing environment. As such, the present invention allows firing with substantially reduced cracking and without explosions.

Further, since Beall teaches removal of the first organic compound during drying, it does not teach or suggest how any further problems, i.e., cracking and/or explosive firing environments, may be overcome. Likewise, although Chalasani teaches a similar binder system, there is no indication of how to overcome problems encountered in firing it. In particular, neither Beall nor Chalasani teach or suggest what special handling considerations might be employed in the firing step to achieve substantial removal of the first prior to the release of the second.

In particular, none of the cited references, alone or in combination, teach in a first phase, following drying, heating in an *oxidizing atmosphere* to a temperature and for a time to enable sequential removal of the organic compounds, such that the organic compound with the lower weight loss onset temperature is *substantially removed* prior to the release of the organic compound with the higher weight loss onset temperature. Examiner offers no rationale why Beall or Chalasani teaches *substantial removal* of the first organic compound prior to the release of the second organic compound with the higher weight loss onset temperature.

Examiner should note that *substantial removal* is a requirement of the claims. Such substantial removal of the first prior to removal of the second is nowhere suggested in any of the references. Examiner should pay close attention to Fig. 2 in the present application. Fig. 2 illustrates that to achieve *substantial removal* prior to the second organic, firing considerations must be employed such as holding the furnace temperature below the weight loss onset temperature of the second organic for a time until the first is *substantially removed*

(See para. 0028). Thus, special considerations must be employed to achieve *substantial removal.*

The present invention addresses the problems of propensity for part cracking and/or providing a safer environment by substantial removal of the first organic compound prior to the second in an oxidizing firing environment. Further, since none of the references cited are: 1) directed to the same problem, or 2) teach any solution to it, they cannot render the claimed invention obvious. They do not teach or suggest *substantial removal.* Accordingly, it is asserted that the obviousness rejections of claim 1 are overcome and should be withdrawn.

As the rejection relates to claim 16-20, and 22-23, the claimed invention is clearly not taught or suggested by any combination of the references. In particular, none teaches *following drying*, firing the green ceramic structural body in an atmosphere containing up to 21% by volume O_2 to a temperature and for a time to *substantially remove* the oil or oil-based compound *prior to release of the binder.* No such special firing considerations are taught or suggested in the cited references. Accordingly, the rejection of claims 16-20, and 22-23 is improper and should be withdrawn.

As the rejection relates to claim 24, the claimed invention is clearly not taught or suggested by any combination of the references relied upon. None teach following drying and during firing, heating the green ceramic structural body to a first temperature at or above the first weight loss onset temperature, *but below the second weight loss onset temperature* for a time to enable *substantial removal* of the oil or an oil-based organic compound, and then followed by further heating at a temperature at or above the second weight loss onset temperature until there is substantial removal of the organic binder compound. No such special firing considerations are discussed at all in any of the references. Accordingly, the rejection of claims 24-27 is improper and should be withdrawn.

3. Comments on the "Response to Arguments"

Applicant's are confused by Examiner assertion that the 112, second para. rejections are maintained. Examiner has not repeated those rejections in that no rationale is offered nor are any claims specifically rejected. Accordingly, we assume this is in error and that the later dated cases of the CAFC cited by Applicant (later than Ex Parte Oetiker - Bd. PA&I. 1992) are persuasive that the term "substantially" is not indefinite. Examiner should also note that the present application is not without standards. Examples are provided as well as Fig. 2 illustrating substantial removal.

4. Conclusion

Based upon the above amendments, remarks, and papers of records, Applicant believes the pending claims of the above-captioned application are in allowable form and patentable over the prior art of record. Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

Applicant believes that no extension of time is necessary to make this Reply timely. Should Applicant be in error, Applicant respectfully requests that the Office grant such time extension pursuant to 37 C.F.R. § 1.136(a) as necessary to make this Reply timely, and hereby authorizes the Office to charge any necessary fee or surcharge with respect to said time extension to the deposit account of the undersigned firm of attorneys, Deposit Account 03-3325.

Please direct any questions or comments to Randall S. Wayland at (607) 974-0463.

Respectfully submitted,

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